REMARKS

Claims 30-33, 35 and 37-46 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claim 35 is rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirements. This rejection is respectfully traversed.

Reference in claim 35 to a plurality of "unrelated clients" is supported by the specification and drawings. Notwithstanding the support in the specification and drawings Applicant has amended claim 35 to remove this limitation thus broadening the scope of claim 35. Therefore, the Examiner is respectfully requested to reconsider and withdraw this rejection.

REJECTION UNDER 35 U.S.C. § 103

Claims 30-33 and 44-46 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lupien et al. (U.S. 5,845,266) in view of Kane (U.S. 6,317,728).

Initially, it is pointed out that independent claim 30 has been amended to more positively reflect a method for trading a security through a network accessible brokerage comprising "receiving from a client of the network accessible brokerage at least one computer implemented decision model for the security wherein the decision model comprises a mathematical function for receiving data and providing at least one value

wherein the at least one value is compared to a decision point for deciding to buy or sell the security." Claim 44 has been similarly amended. This amendment describes receiving from a client a decision model that comprises a mathematical function that receives data and provides a value that is compared to a decision point. This is contrasted with receiving from a client a value, for example, a value representing the price that a buyer is willing to pay for a security. This amendment also further clarifies the distinction between a brokerage intended to facilitate a security transaction with a security market and the security market itself, wherein the actual buying and selling of the security takes place.

The method of the invention as described in claims 30 and 44 advantageously allows for a client to define in the form of a mathematical function a decision model that will determine whether to buy or sell a security. The client submits the decision model to the brokerage for monitoring and directing the automated buying and selling of the security. This method allows the client to define buying and selling as a dynamic relationship based on a function of data. This dynamic relationship is different from a direct relationship, for example a decision to buy if a security reaches a certain price. In a direct relationship the client may indicate a willingness to buy or sell only if a security reaches a certain price (or is less than a certain price) but otherwise there is no possibility of a transaction. The ability to define a dynamic relationship through a mathematical function allows a client the opportunity to design their own decision model and implement creative and novel ideas in how security transactions will be made. A dynamic relationship allows for developing a decision model for both buying and selling the security. The method of the invention is therefore distinguishable from any system

that dictates buying or selling based on a direct (rather than dynamic) relationship between the decision model and the deciding factor.

Neither Lupien nor Kane teach or suggest a method for trading a security wherein a client is offered the opportunity to submit into the system a mathematical function as a decision model that defines a dynamic relationship between data and the decision to buy/sell. Neither Lupien nor Kane alone or in combination teach or suggest the limitation of claims 30 or 44. For this reason alone, among others as will be explained, the rejection of claims 30-33 and 44-66 should be withdrawn.

Regarding claim 30 the Examiner states that "Lupien discloses receiving from a client of the network accessible brokerage at least one computer implemented decision model (satisfaction density) for the security, and inputting data into the decision model." Lupien does not teach or suggest this functionality. Specifically, Lupien does not teach or suggest a method for trading a security through a network accessible brokerage since Lupien is directed to a "crossing network" that matches buy and sell orders based upon a satisfaction in quantity profile. Second, Lupien does not teach or suggest inputting data into the decision model after it has been received from a client even assuming for the sake of argument that the satisfaction density profile of Lupien is a decision model.

The Examiner cites Lupien, Col. 4, lines 19-36 in support. This section of Lupien, however, would support that Lupien is directed to a market not a brokerage and that the satisfaction density profile does not receive inputted data. This section of Lupien provides "once the satisfaction density profile is complete, the trader crosses the satisfaction density profile to be transmitted to a central matching controller ('CMC')

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which anonymously matches buy and sell orders as discussed below. . . . Upon transmission of a satisfaction density profile to the CMC, the CMC will cause both buy profiles to be stored in a buy profile database and sell profiles to be stored in a sell profile database. The CMC will then calculate for every buyer/seller profile pair, a mutual satisfaction cross product profile." Lupien at Col. 4, lines 24-36. By matching buyers and sellers clearly Lupien discloses a security market and not a brokerage to facilitate the sale with a security market. In Lupien there is no need to transmit a buy/sell order to a market computer since the system in Lupien is the market.

Further, in Lupien there is no inputting of data into the satisfaction density profile (i.e. the alleged decision model). Rather, the "CMC will then calculate for every buyer/seller profile pair, a mutual satisfaction cross product profile." See Lupien at Col. 4, lines 35-36. In Lupien the satisfaction density profile contains price and volume values of a buyer to compare with price and volume values of a seller. In Lupien there is no mathematical function (i.e. decision model) for inputting data into.

The Examiner further states that Lupien discloses "in response to monitoring said decision model, automatically generating a buy transaction order, and automatically transmitting the buy transaction order to the market computer." Lupien in fact does not teach or suggest this functionality. In particular, there is no monitoring of a decision model (i.e., the satisfaction density profile) nor is an order to buy automatically generated based on monitoring the decision model, nor is a buy transaction order transmitted to a market computer. As indicated in the previously quoted section of Lupien the satisfaction density profiles are transmitted to a central matching controller ("CMC") where the "buy/sell orders represented by the ranked grid values of the mutual

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satisfaction cross products are then matched in order, and matching trades are aggregated by the CMC system. The matching process then continues down the ranked list." Lupien at Col. 4, lines 24-46. Clearly, the "matching" of Lupien is different from monitoring. The "matching" of Lupien is also different from generating a transaction order or transmitting the transaction order to a market computer. The "matching" of Lupien fundamentally distinguishes Lupien from claims 30 and 44. Therefore, in Lupien there is no monitoring of the satisfaction density profile and there is no generation of a sell transaction order or transmission of a sell transaction order to a market computer.

The Examiner next states that it would have been obvious to one skilled in the art at the time the Applicant's invention was made to "modify the disclosure of Lupien and include monitoring the decision model, as disclosed by Kane, to monitor and assign rating powers to buy/sell agents and improve the performance of the system." There are several reasons why this combination does not establish a *prima facie* case of obviousness.

First, neither Kane nor Lupien either individually or in combination teach or suggest all of the limitations of claims 30 or 44. Neither Kane nor Lupien teach or suggest "receiving from a client of the network accessible brokerage at least one computer implemented decision model for the security wherein the decision model comprises a mathematical function for receiving data and providing at least one value wherein the at least one value is compared to a decision point for deciding to buy or sell the security." As already discussed Lupien does not teach or suggest this functionality. Kane also fails to teach or suggest this functionality.

Kane is directed to a "securities trading system based on the principles of artificial intelligence." It appears that in Kane the "artificial intelligence" is a "decision logic for executing buy and sell orders in conformance with the buy/sell rules. In the securities trading system according to the invention, the decision logic includes at least one decision agent, the agent representing a respective buy/sell rule ..." See Kane Abstract. In Kane "Each agent exists as a module or section of computer logic, physically store in a computer memory ... Each agent performs a respective buy or sell decision based on buy and sell rules embedded in each agent." Kane at col. 5, lines 5-11. Therefore Kane does not teach or suggest receiving a decision model from a client wherein the decision model comprises a mathematical function. Nor does Kane teach or suggest comparing a value generated by the mathematical function with a decision point for deciding to buy or sell the security.

There also is no suggestion or motivation to combine the teaching of Lupien with the teachings of Kane. The Examiner states that it would have been obvious to "modify the disclosure of Lupien and include monitoring the decision model, as disclosed by Kane, to monitor and assign rating powers to buy/sell agents and improve the performance of the system." However the Examiner does not establish the specific understanding or principle within the knowledge of the skilled artisan that would have provided motivation to change the satisfaction density profile of Lupien into the buy/sell agents of Kane. There would be no motivation to make such a modification since the intended benefit of the crossing network of Lupien is lost as a result of this proposed change.

According to Lupien its invention "provides a richer means of price discovery than is available in any existing market structure, including exchanges. In steady-state operation, where all feasible matches have been performed and the system is awaiting the next profile input, there will exist a group of unfilled buy satisfaction density profiles and a group of unfilled sell satisfaction density profiles, with no overlap between the two groups (otherwise a match would be performed). The two-dimensional price/size region between these groups is denoted the 'spread region,' and depicts, at each value of size, the spread between the highest non-zero buy satisfaction profile price and the lowest non-zero sell satisfaction profile price. This depiction of the aggregate of unfilled satisfaction profiles is a significant generalization of the market quotes currently provided by exchanges and market makers, and obviates the need for parasitic pricing inherent in other crossing networks. It also provides substantially greater price discovery across the full range of trade sized than is contained in the current quotations of best-bid and best-offering prices and corresponding sized." Lupien at col. 5, lines 5-25. Clearly the satisfaction density profile of Lupien is central to providing the desired functionality of price discovery in the crossing network. There would be no motivation or desire to one skilled in the art to change the satisfaction density profile of Lupien into the buy/sell agents of Kane since there would be no ability for display of a price/size region between buyers and sellers as advantageously suggested in Lupien.

In fact, in Lupien the intended fundamental function as a crossing network would be lost as a result of the examiner's suggested modification. In a crossing network buyers and sellers are matched based on criteria (e.g. price and number of shares) that each trader is willing to enter into a trade for a particular security. Conversely the

agents of Kane provide buy/sell recommendations and then orders to buy or sell are placed accordingly. The agents of Kane do not provide a means for matching buyers and sellers based on preset criteria. Therefore, the crossing network of Lupien would lose its functionality as a crossing network if modified to replace the satisfaction density profiles with the agents of Kane. Therefore, the Examiner's suggested modification would change the principle of operation of Lupien and result in an unworkable third system.

Regarding claims 31-33 the Examiner states that "Lupien discloses canceling the sell order if the decision model indicates a trade is undesirable." Lupien does not teach or suggest this functionality. The sections of Lupien cited by the examiner including column 11, lines 1-22 and column 19, lines 22-40 say nothing about canceling a sell order if the decision model indicates a trade is undesirable. In Lupien there is no opportunity to cancel an order based on a decision model (i.e. satisfaction density profile) because as previously stated in Lupien "buy/sell orders represented by the ranked grid values of the mutual satisfaction cross products are then matched in order, and matching trades are aggregated by the CMC system." Lupien at col. 4, lines 24-46. In Lupien once that buy/sell orders are matched a trade is made. As the examiner has stated Lupien does not teach or suggest the step of monitoring a decision model. Since there is no monitoring of a decision model there cannot be canceling of an order based on (monitoring) a decision model.

The Examiner states that Kane discloses establishing a floating stop loss or dynamic stop loss. Kane does not teach or suggest this functionality. A floating stop loss and dynamic floating stop loss as described in the specification does not exist in

the disclosure of Kane. A stop loss is different from a floating stop loss or a dynamic floating stop loss.

The Examiner states that it would have been obvious to "modify the disclosure of Lupien and include step of generating order and monitoring to limit the losses." As already stated, in Lupien there is no need to monitor a decision model since the "matching" of buy/sell orders is the transaction. For these reasons and the reasons already discussed neither Lupien nor Kane individually or in combination teach or suggest the invention of claims 31-33. As a result the combination of Lupien and Kane does not establish a *prima facie* case of obviousness.

Regarding claims 44-46 the Examiner states that Lupien discloses a decision model "wherein the decision model comprises logic for **buying and selling the security**, wherein the at least one decision model **enters a state comprising a buy state and a sell state** ... (emphasis added)." The satisfaction density profile of Lupien (i.e. the alleged decision model) does not comprise logic for buying **and** selling the security. In Lupien there is either a buy satisfaction density profile or a sell satisfaction density profile for a particular security. Nor does the satisfaction density profile of Lupien enter a state including a buy state or a sell state. Also there is no data input into the satisfaction density profile after it is submitted for matching with other satisfaction density profiles. For these reasons together with the reasons previously discussed neither Lupien nor Kane individually or in combination teach or suggest the invention of claims 44-46. As discussed the combination of Lupien and Kane does not establish a *prima facie* case of obviousness.

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Claims 35 and 37-43 are rejected under 35 U.S.C 103(a) as allegedly being upatentable over Lupien in view of Kane and Buist. The examiner states that Lupien "discloses receiving at least one computer implemented buy decision model for the security, and receiving at least one computer implemented sell decision model for the security, and providing a computer implemented monitoring process for monitoring (observing) the decision models for a buy decision and/or a sell decision ..." Lupien does not teach or suggest this functionality. In Lupien there is no reason to prepare both a buy satisfaction density profile and a sell satisfaction density profile for the same security since in the matching process an investor could be buying and selling the security to himself.

Nor does Lupien teach or suggest a transaction approval process as stated by the examiner. The Examiner's basis for this remark is the presence in Lupien's abstract of a reference to accommodating stock exchange rules. However, accommodating stock exchange rules is not explained in Lupien as a step taken after indication of a transaction by a decision model to approve of the transaction before it is entered into.

Nor does Lupien teach or suggest a computer implemented transaction submission process for submitting a transaction to buy or sell the security to a market computer as stated by the Examiner. In Lupien the crossing network system itself is the market.

Nor does Lupien teach or suggest inputting data into the decision model. The decision model of Lupien, according to the Examiner, is the satisfaction density profile. The satisfaction density profile once created does not accept data. Instead it is

matched with buy/sell orders in other satisfaction density profiles. In Lupien there is no inputting of data into the decision model.

Nor does Lupien teach or suggest submitting an order to buy/sell based on a buy/sell decision of a decision model. In Lupien the buy/sell orders contained in satisfaction density profiles are matched resulting in a transaction.

Nor does Lupien teach or suggest continuing inputting data into the decision model (i.e. satisfaction density profile). Again, the buy/sell orders in the satisfaction density profile of Lupien are matched resulting in transactions. There is no continuing inputting data into the satisfaction density profile after it is matched.

Nor does Lupien teach or suggest repeating the steps of inputting data and monitoring a decision model if a buy decision is reached or a sell decision is reached. First, as already discussed Lupien does not teach or suggest that the satisfaction density profile is for buying and selling the security. Second, in Lupien once the satisfaction density profile is satisfied by matching it with another satisfaction density profile the process stops. There is no repeating of the process steps.

The Examiner states that Kane discloses what is not disclosed by Lupien including "providing a computer implemented transaction approval process on the brokerage computer system." The Examiner refers to "Fig.1 device connected to #20" in support. Fig. 1 of Kane however does not have an item no. 20. Notwithstanding, in Kane a transaction order is sent to a brokerage, for example E-Trade to be filled. This means that the system of Kane does not exist on a brokerage computer system. Instead the system of Kane communicates with a brokerage computer system.

The examiner states that it would have been obvious to modify the disclosure of Lupien and "include monitoring the decision models through brokerage network, and describe the system architect of on-line (Internet or day-trading) as discloses by Kane and Buist, to provide system view and system monitoring capability using user interface (GUI) or automatic evaluating decision logic to monitor a portfolio of stocks in real time which can shield an investor from loss while maximizing gain." There are several reasons why this combination does not establish a *prima facie* case of obviousness. Several of these reasons have already been discussed herein. Adding Buist does not change the previously discussed fundamental flaws with the proposed combination.

Further, the proposed combination does not teach or suggest all of the limitations of claim 35. Second, the Examiner does not explain the motivation for making this combination. Third, the proposed combination would not function as implied by the examiner. The resulting combination would render the system disclosed in Lupien unfit for its stated purpose of providing for a matching of buyers and sellers while allowing for price discovery. See Lupien col. 5, lines 5-25.

Regarding claim 37 all of the above stated reasons support distinguishing the cited references and explaining why a *prima facie* case of obviousness is not supported.

Regarding claims 38-39 the Examiner states that Lupien discloses that "the decision model comprises a moving average calculation of at least a portion of the data ... and wherein the decision model comprises a weighted data process." The Examiner cites col. 2, lines 62-67 and col. 23, lines 1-20 of Lupien in support of this statement. However, the discussion in Lupien regarding averaging and weighting does not state

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that any averaging or weighting is part of the satisfaction density profile (i.e. the purported decision model) as provided by the client.

Regarding claims 40-43 the Examiner states that Kane discloses automatically initiating a floating stop loss process for selling the security wherein either the floating stop loss process or the decision model can reach a decision to sell the security, and wherein the stop loss is a dynamic floating stop loss. Kane does not teach or suggest this functionality as part of the trading system disclosed in Kane. The floating stop loss as described in the specification is different from a traditional stop loss. Further, a dynamic stop loss also differs from a traditional stop loss as described in the specification. By calling it "dynamic" the stop loss is meant to be <u>changing</u>, not "monitoring stocks continuously" as stated by the examiner.

For these reasons 30-33, 35, and 37-46 are distinguishable from the cited references and are not unpatentable under 35 U.S.C. § 103(a). The Examiner is respectfully requested to reconsider and withdraw the rejections.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the
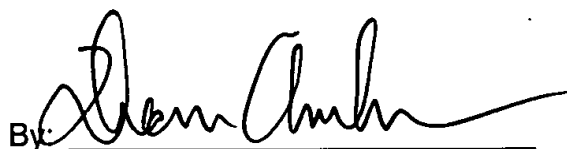
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Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: 8/20/2004

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